

UNIVERSITY CURRENTS

A Newsletter For and About the University Nuclear Engineering and Science Community

U. S. Department of Energy

Winter 2000

NERAC Meeting Addresses University Issues

The most recent meeting of the Nuclear Energy Research Advisory Committee (NERAC) occurred January 10-11, 2001, at the Crystal City Marriott in Arlington, Virginia. The Chairman of NERAC, Dr. James J. Duderstadt, presided over the well attended meeting that included William D. Magwood, IV Director of the Office of Nuclear Energy, Science and Technology (NE), and former Under Secretary of Energy Ernest Moniz.

The discussion was wide ranging from the upcoming budget for FY 2002 to the status of the Generation IV nuclear energy systems effort. A large portion of the meeting focused upon issues of importance to the university community. The status of the Nation's university research reactors was a hot topic in light of recent indications that three prominent universities -- Michigan, Cornell and MIT -- are evaluating the decommissioning of their research reactors. There was a general belief that the actions by these three institutions could influence the decisions of other universities and that something must be done immediately by the Department of Energy to address this matter. The general consensus of the NERAC members was that a peer-reviewed program evaluating the reactors must be put in place and a commitment by DOE to support the reactors and university nuclear engineering must be forthcoming and immediate.

Director Magwood stated that NERAC, with its objectivity, subject specialization, and knowledge, is in a good position to determine whether and how the Government should support the operation of university research reactors. He suggested that information be gathered about university reactor operating costs and operating data, and reactor capabilities and usage, and that it be quality reviewed and standardized.

Dr. Duderstadt stated that this would address the near-term crisis with the longer term strategic issue addressed by the "Blue Ribbon Panel" report of May 2000. NERAC recommended that increased support should be based upon merit and a peer-review process that focuses the resources on the national interests and not the status quo.

The new three-member panel will be headed by Robert Long (formerly of GPU/University of New Mexico) and include Allen Sessoms of Harvard and Jose-Luis Cortez. The panel will review university reactor research and training capabilities and operating costs. It will provide DOE with clear, near-term recommendations as to actions that should be taken by the Federal Government and a long-term strategy to assure the continued operation of vital university reactor facilities in the United States. The panel will complete its work in time to make a final report to NERAC in April. ■



Front Row (left to right): Dale Klein, John Taylor, Neil Todreas, Gail Marcus, Bill Magwood, James Duderstadt, Norton Haberman, Richard Reba, John Ahearne, Joseph Comfort. Second Row (left to right): Steve Fetter, Jose-Luis Cortez, Lura Powell, Sekazi Mtingwa, Joan Woodard, Andy Klein, Maureen Crandall, Allen Croff, Charles Till, Robert Long, Joy Rempe, Ashok Thadani, Marvin Fertel, Beverly Hartline, Allen Sessoms, Tom Cochran.

Spotlight

Cornell's Ward Center for Nuclear Sciences



Spotlight is a new feature in "University Currents". Each issue we will focus upon some aspect of the university nuclear engineering community. Because of the importance of university research reactors to the Nation's scientific capabilities and because Cornell's Ward Center, like several other university research reactors, is faced with an uncertain future, this facility was selected to be highlighted.

On December 20, 2000, Director William D. Magwood, IV, of the Office of Nuclear Energy, Science and Technology and John Gutteridge, head of the University Programs visited Cornell to tour the Ward Center and discuss its future with university representatives.



(Left to right) William D. Magwood, IV, John Gutteridge, and Dr. Kenan Unlu

The central mission of the Ward Center for Nuclear Sciences (WCNS) is to provide analytical and testing facilities for the research and education activities of faculty, staff and students at Cornell University. Its resources are also available to users outside Cornell as part of the public service functions of the University, symbolized by its status as the Land Grant University of the State of New York.

The largest facilities at the WCNS are a 500 kWt TRIGA Mark II Pulsing Nuclear Research Reactor and a 10,000-Curie Cobalt-60 Gamma Cell. Initial criticality of the Cornell TRIGA reactor was achieved on January, 1962, under a steady state, 100 kWt power license. The license was

renewed with increased power limit to 500 kWt in steady state and \$3.00 in pulse operation in November 1983. The Cornell TRIGA has been extensively utilized during the last 38 years of operation by a diverse group of users within Cornell University, by governmental institutions, and by industrial companies. Instruction and research activities were first initiated in the field of Nuclear Engineering at Cornell's School of Applied Engineering Physics and then as the Nuclear Science and Engineering Program. The Ward Laboratory at Cornell, which houses the Cornell TRIGA reactor, became the Ward Center for Nuclear Sciences in January 1997. With the approval of the Cornell Board of Trustees, the Ward Center became a unit under the Vice Provost for Research. This administrative change makes the Cornell TRIGA reactor true university-wide research and teaching facility to provide interdisciplinary teaching and research capabilities to students and faculty in all colleges at Cornell.

The Cornell TRIGA reactor is the only operating university research reactor in the State of New York. The Cornell TRIGA is used as a source of radiation for numerous nuclear analytical and testing facilities. These facilities include: Neutron Activation Analysis, Fast Neutron Irradiation, Neutron Radiography, Neutron Induced Auto-Radiography, Cold Neutron Source, Prompt Gamma Activation Analysis (near completion), and Neutron Depth Profiling (near completion). In addition the development of a Boron Neutron Capture Therapy facility and a Neutron Powder Diffractometer facility are planned. Recently a new neutron activation analysis laboratory was completed with NSF funds for the analysis of dendrochronologically dated tree rings for the identification of volcanically-influenced periods of environmental change.

The academic program for nuclear sciences is organized under the graduate field of Nuclear Science and Engineering, and offers M. Eng., M.S. and Ph.D. degrees. The Cornell TRIGA reactor is utilized by the graduate programs both in courses and in design and research projects. In the past five years, the average annual number of graduate students involved in design and research projects utilizing the reactor has been about eight. For additional information, contact Dr. Kenan Unlu, Director, of WCNS, (607)255-52224, KU15@cornell.edu. ■

Fellowships and Scholarships Awarded

The U. S. Department of Energy's Nuclear Engineering and Health Physics Fellowship and Scholarship Program is currently in its nineteenth year of operation. Over this period of time, the program has supported over 500 students and DOE had designated 32 universities as participating universities for fellowships and scholarships. With a stipend level of \$1,400 per month and full payment of tuition and fees this program remains as one of the Nation's premier fellowships in the United States. At the present time, 19 graduate students and 45 undergraduates are receiving support. Twenty-five universities are participating in the program. Information about the program can be obtained from John Gutteridge (301)903-1632 or Craig Williams (865)379-0403. ■

Nuclear Engineering and Health Physics Scholars Academic Year 2000-2001 Fellowships

Name	Class Standing	Institution
William Bird	Completed 08/2000	Tennessee
James Brown	2 nd Year	Penn State
Chris Culbertson	2 nd Year	Purdue
Jeff Densmore	3 rd Year	Michigan
Bradley Eccleston	Completed 8/2000	Oregon State
Daniel Evans	4 th Year	Tennessee
Eduardo Farfan	2 nd Year	Florida
Michael Folkert	2 nd Year	MIT
Marc Garland	2 nd Year	Maryland
Holly Gersch	2 nd Year	Michigan
Greg Gibbons	Completed 8/2000	Idaho State
David Griesheimer	1 st Year	Michigan
Reza Gouw	3 rd Year	Florida
Jeff King	2 nd Year	New Mexico
Carolyn Lehner	2 nd Year	Michigan
Heather MacLean	4 th Year	MIT
Brian Miller	3 rd Year	New Mexico
Scott Mosher	4 th Year	Georgia Tech
Jennifer Parsons-Hoff	3 rd Year	Tennessee
William Prucka	3 rd Year	Michigan
Todd Smith	4 th Year	Purdue
Benjamin Wilson	2 nd Year	MIT

Nuclear Engineering and Health Physics Scholars Academic Year 2000-2001 -- Scholarships

Name	Class Standing	University	Name	Class Standing	University
Bilch, Christopher	Senior	Texas	Lazarine, Alexis	Sophomore	Texas A&M
Brickner, Bret	Senior	Florida	Linrud, Christopher	Senior	Oregon State
Carstens, Nathan	Senior	Purdue	Lobdell, Simon	Junior	Texas A&M
Carter, Thomas	Junior	Florida	McAnallen, Julia	Senior	Michigan
Coselman, Martha	Junior	Michigan	McKittrick, Thomas	Senior	Mass., Lowell
Davidson, Chal	Senior	Oregon State	Moore, Marissa	Junior	Texas A&M
Davis, Ian	Junior	Oregon State	Mundy, Daniel	Sophomore	Purdue
Drudy, Keith	Junior	Michigan	Pope, Michael	Junior	Texas A&M
Edwards, Jared	Junior	Tennessee	Radawski, Jeffrey	Junior	Michigan
Eidietis, Nicholas	Senior	Michigan	Renneke, Richard	Senior	Kansas State
Guibord, Nicole	Senior	Michigan	Sepke, Scott	Senior	Michigan
Haynes, Carl	Senior	Oregon	Sistrunk, Jacob	Sophomore	Florida
Henahan, James	Junior	Michigan	Smith, Danielle	Junior	Missouri
Humrickhouse, Paul	Sophomore	Wisconsin	Smolinska, Anna	Junior	Florida
Johansen, Norman	Junior	Tennessee	Solack, Janelle	Junior	Michigan
Jones, Cindy	Junior	Tennessee	Sorenson, Rueben	Senior	Michigan
Jordon, Nick	Junior	Michigan	Sorenson, Steve	Senior	Wisconsin
Kenny, Zachary	Sophomore	Oregon State	Szollosy, Robert	Senior	Florida
Khachaturian, Mark	Senior	Michigan	Tapper, Derek	Sophomore	Purdue
Kiff, Scott	Senior	Purdue	Van Duyn, Lee	Junior	Purdue
Kowalczyk, Rich	Senior	Michigan	Werkheiser, David	Senior	Penn State
Lang, Erin	Junior	Michigan	Willows, Britt	Junior	Texas A&M
Larkins, Keith	Sophomore	Florida			



The Department of Energy's Office of Nuclear Energy, Science and Technology (NE) in cooperation with the Argonne National Laboratory (ANL) and Idaho National Engineering and Environmental Laboratory (INEEL) has announced a Summer 2001 Internship Program.

The graduate and undergraduate student internship is intended to enhance the education of students majoring in science, mathematics, engineering technology, or other areas that support the missions of NE. NE's two lead laboratories for nuclear reactor technology, ANL and INEEL, will make awards to eligible graduate and undergraduates through a grant from DOE. These internships provide an intensive introduction to mission support areas through the guidance of experienced mentors. Students are selected based on their chosen field of study (major) that matches the project description. Applications are due on or by March 12, 2001. Details on eligibility, qualifications, duration, awards, health insurances, and selection can be viewed at <http://www.inel.gov/academic> and <http://www.depl.anl.gov/catalog>. Information on these internships is also available on the NE website, nuclear.gov. ■

University of North-West TELP Grant

In August 2000, the Ohio State University (OSU) nuclear engineering graduate studies program began a three-year relationship with the Master's in Applied Radiation Science and Technology (MARST) program of the University of North-West, a traditionally native university in South Africa. The MARST program is in its third year of operation. With funding provided by the U.S. AID and administered by the United Negro College Fund, OSU is providing guidance with the development of curricula, identification of textbooks, provision of reference materials, research collaboration, and support of distance learning. The funds also will support a graduate student at OSU for three years.



In July, the director of the MARST program visited the OSU campus for a week of discussions with nuclear engineering faculty. In September, Professor Rich Denning visited the University of North-West campus, met with a number of supporting organizations in South Africa, presented seminars, and interviewed applicants for the fellowship at OSU. Ms. Margaret Mkhosi, pictured above, who is a graduate of the University of North-West physics program, entered graduate school at OSU at the beginning of the winter quarter. After graduating from OSU, Ms. Mkhosi will return to the University of North-West to join the faculty of the MARST program. ■

Marrero Selected to Attend Nobel Laureates 51st Annual Meeting

Tom Marrero, doctoral student in Chemistry at the University of Missouri, has been selected to attend the 51st annual meeting of Nobel Laureates in Lindau, Germany, June 25-29, 2001. Tom is financially supported for his PhD studies under the University of Missouri's U.S. Department of Energy Radiochemistry Education Award Program, a three-year grant jointly awarded to the College's Nuclear Engineering Program and the University of Missouri's Chemistry Department. Tom's major advisor is Dr. Stan Manahan (Chemistry), and Dr. Bill Miller (Nuclear Engineering) serves on his doctoral committee. Dr. David Clark (LANL Seaborg Institute), Dr. Robert Atcher (LANL Biosciences Division), and Dr. Kenneth Nash (ANL Chemistry Division) serve as advisors to University of Missouri for enhancing radiochemistry education.

Each year since 1951, Nobel Prize winners in Chemistry, Physics, Physiology or Medicine have met in Lindau, Germany, to discuss major issues of importance to their fields with students from around the world. The U.S. Department of Energy's Office of Science and the Oak Ridge Associated Universities is sponsoring a group of 38 second-year graduate students to attend the 51st anniversary meeting in 2001. The DOE/ORAU delegation consists of 38 U.S. doctoral students whose current research at their universities is funded by DOE. Selected students will attend lectures by the Nobel Laureates as well as daily informal small-group meetings with the Nobel Prize winners to discuss a wide range of issues about their research and other activities. Transportation, lodging and registration expenses will be arranged and paid for by the Office of Science. Participants will meet in Washington, D.C. for an orientation meeting, and then travel to Germany as a delegation to attend the meetings. The program provides a unique opportunity to meet with some of the world's leading scientists. Lindau, where the meeting is held, is a picturesque medieval city located on an island at the eastern end of Lake Constance, just north of the Swiss Alps at the common border of Austria, Germany, and Switzerland. ■

UMASS Lowell Converts to LEU Fuel

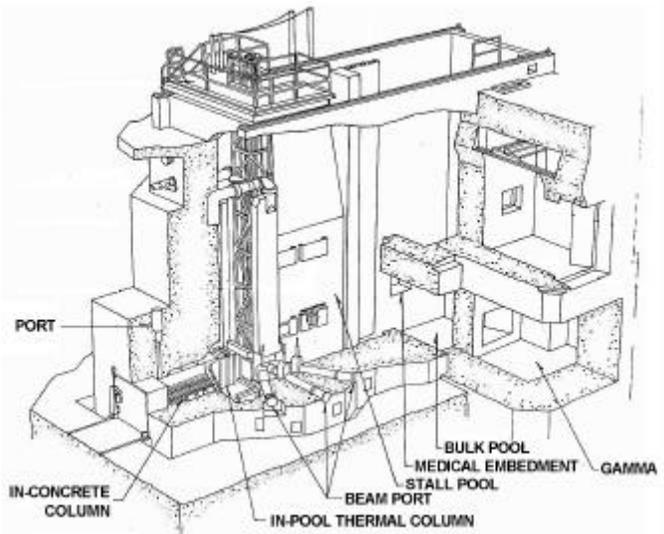
The University of Massachusetts Lowell Research Reactor (UMLRR) has completed the conversion to low-enrichment uranium (LEU) fuel.

The 1 MW reactor had operated with a reactor core consisting of 29 high-enrichment uranium (HEU), MTR-type, flat-plate fuel elements. Under the DOE Fuel Support Program, the UMLRR completed the conversion to low-enrichment, uranium-silicide, flat-plate fuel this past August. "We were very well prepared for this," stated Leo Bobek, reactor operations director at Lowell. "The process went very smooth. The LEU fuel loading and approach to critical were completed in two days. Testing and benchmarking the core was completed in about two weeks."

Design and modeling of the new LEU core became a part of the educational experience at Lowell. Over several years, UML Professor John White of the Chemical and Nuclear Engineering Department has advised four master's theses and several undergraduate projects directly associated with the LEU conversion. Professor White and his students have performed extensive modeling of the new reactor core using the VENTURE and DORT computer codes. Practical experience also has played a part. "The majority of our reactor staff are students," according to Bobek. "The preparation and actual conversion provided a very unique learning opportunity to bring a new reactor core on-line."

UMLRR began operation in 1974. After twenty-six years, the original HEU fuel had reached the end of its useful life. Prior to conversion, it became difficult to operate the reactor for more than a few hours due to fuel burn-up. The new LEU core is more compact, consisting of 21 LEU fuel elements. As part of the conversion, the new reactor core design incorporates a central flux-trap for improved neutron activation analysis and radioisotope production.

Part of the interdepartmental UML Radiation Laboratory, the UMLRR is currently involved with various research projects including: analytical testing of medical radiation oncology devices for treating cancer; stable-isotope tracer analysis for biomedical research and diagnostics; radiation induced materials enhancement for commercial and military applications; radiation resistant electronics testing for commercial space and military applications; and the development and testing of materials for spent nuclear fuel storage and shipment. The reactor is used by six UML departments and in 13 courses, supporting degree programs in sciences, engineering, and other disciplines. The UMLRR also provides extensive outreach activities for pre-college students. ■



URI Program Selections Made

The fiscal year 2001 selections under the University Reactor Instrumentation (URI) program were made the week of February 12, 2001, following a merit review panel meeting in Salt Lake City. A total of 23 reactor upgrade proposals were selected from U.S. colleges and universities that have a licensed, operating research reactor. One proposal did not receive funding and four other eligible schools that have licensed, operating reactors did not apply. Total requested funding exceeded \$1.9M. A total of \$825,437 will be awarded as follows:

Kansas State University	\$72,757
University of Michigan	\$62,000
University of Texas at Austin	\$60,000
Massachusetts Institute of Technology	\$56,220
University of Florida	\$54,556
Texas A&M University - TEES	\$47,543
Reed College	\$47,024
University of Massachusetts Lowell	\$45,456
Rensselaer Polytechnic Institute	\$43,798
Cornell University	\$39,010
North Carolina State University	\$37,500
Washington State University	\$35,192
University of Wisconsin	\$33,372
University of Missouri-Columbia	\$32,425
University of California, Irvine	\$30,500
University of Maryland	\$25,500
The Ohio State University	\$23,100
Oregon State University	\$21,284
University of Utah	\$20,000
University of California, Davis	\$15,000
University of Missouri-Rolla	\$13,200
Purdue Research Foundation	\$10,000

Marie Curie Exhibit Makes Its Way to Michigan

Over 3000 people, 2000 of them school children, visited the Marie Curie Exhibit at the University of Michigan (U-M) from October 9 through November 3. The exhibit, conceived and assembled by Texas A & M University, included equipment used by Marie and Pierre Curie on loan from the Musée Curie in Paris. It also highlighted the work of other women scientists, and captivated audiences with hands-on demonstrations of radioactive, common household items; CT scans; and a quiz on the uses of radioactivity. Professor Kimberlee Kearfott, of the Nuclear Engineering and Radiological Sciences Department, put together a display case describing the life of the pioneering health physics work of Elda Anderson. In another display, she featured items from the 1960s, such as the "atomic cocktail" cookbook, "Tom Swift and the Atomic Robot" and other items claiming special powers because they contained "atomic" material. This was an age when nuclear energy was deemed "exciting."

Middle school students and high school students comprised the majority of visitors to the exhibit. Every time slot available during the school day was filled to capacity. Students were able to visit not only the exhibit but also the Ford Nuclear Reactor at the adjacent Phoenix Memorial Laboratory. There they learned about the many research applications of nuclear power from tour guides associated with the U-M's research reactor.

The Exhibit's opening ceremony on October 12th featured Dr. Gail Marcus, President Elect of the American Nuclear Society and the first woman to receive a Ph.D. in Nuclear Engineering. Other speakers during the month included



The four key speakers at University of Michigan's Women in Discovery Symposium. From left to right: Drs. Caroline Herzenberg, Ruth Sine, Judy Franz, and Darleane Hoffman.

Susan Quinn, author of the best selling *Marie Curie: A Life*. She told the audience of her trips to Paris and Poland and the humanness of Marie Curie that often gets lost in the telling of her many accomplishments. Dr. Ruth Weiner, formerly of Sandia National Labs, gave an evening lecture regarding the transportation of radioactive materials.

As a complement to the exhibit, the Nuclear Engineering and Radiological Sciences Department and the U-M Women in Science and Engineering Program hosted a one-day conference on October 18th. The symposium started with Dr. Ruth Sime, a chemistry professor from Sacramento



The Marie Curie exhibit at the University of Michigan. Parents and students were fascinated by Marie Curie's equipment.

City College and author of the popular biography of Lise Meitner entitled *Lise Meitner: A Life in Physics*. Dr. Caroline Herzenberg, from Argonne National Laboratory and co-author of *Women of the Manhattan Project*, then spoke on the women who were critical to the development of nuclear science starting with the Manhattan Project. Dr. Judy Franz, the executive officer from the American Physical Society (on leave from her faculty position at the University of Alabama), spoke on issues that face women scientists today. Dr. Darleane Hoffman, who recently won the Priestley Medal for her pioneering work in discovering new elements, delighted the audience with her announcement of not only elements 114 and 116 but 118 as well. A panel of women engineers ended the conference with a discussion of the challenges of working women.

Partial support for the month-long series of events was provided by the U. S. Department of Energy. ■

2001: a nuclear odyssey

March 29-April 1, 2001



To start the 2001 school year, Texas A&M University has planned the only national student conference of the year. 2001: A Nuclear Odyssey, is themed around the student, and the next true generation of nuclear technologies and developments. The joint ANS/HPS conference is planning a 25 company career fair, allowing students the maximum opportunity to discover the true potential that exists in nuclear engineering beyond school. For insights to research, the ANS/HPS are planning tours of Texas A&M's TRIGA pressurized water reactor, the pulsed-plasma beam reactor, and a trip to NASA's Johnson Space Center in Houston. Travel reimbursements are available. Come to the national student conference for the future of nuclear engineering.

Student Design Competition

The Year 2000 Student Design Contest sponsored by the American Nuclear Society culminated at the Winter ANS Meeting in Washington, D.C. with the following winners who were selected by a panel of judges from industry and government:

“Boiling Water Reactor Fuel Lattice Gadolinia Optimization for Maximum Hot-to-Cold Reactivity Swing,” Stacy Parker, North Carolina State University (winner in the undergraduate category).

“Conceptual Design of a Commercial Poultry Irradiator,” B. J. Marshall and Aleksey Urmanov, University of Tennessee (winner in the graduate category).

For the 2001 contest, all entrants are required to submit electronically 900-word summaries describing their design projects for possible publication in the Transactions of the 2001 Winter Meeting. The summaries must be submitted to the ANS by the deadline for submission (June 22, 2001) and are required in addition to the formal written reports, which are submitted later to the Contest Administrator. Thus, the four entrants who are selected by the judges as finalists (normally, there are two undergraduate finalists and two graduate finalists) will have their summaries published in the Transactions of the Winter 2001 Meeting. For additional information regarding the annual design contest, contact H. L. Dodds, Contest Administrator (email utne@tennessee.edu, phone 865-974-2525) . Information is also available on the ANS web site at www.ans.org. ■

BMI Shipping Cask

The BMI-1 shipping cask is used to transport university nuclear spent fuel elements from the university reactors to US Department of Energy (DOE) storage facilities located at Savannah River and Idaho. The cask is also used for shipment of other nuclear materials as required by the university programs. The scheduling and use of the cask is coordinated by BWXT Idaho, INEEL for the Department. The BMI-1 cask is owned by the Department and serves a vital part in transporting university fuel materials at no cost to the university reactors.

The BMI-1 shipping cask is licensed by the U.S. Nuclear Regulatory Commission, under certificate, beyond its current expiration date of March 21, 2001, of Compliance for radioactive material, #5957 and under 10 CFR Part 71.12. A renewal of the certificate has been requested and is expected to be granted by NRC .

The BMI-1 shipping cask is a steel encased shielded shipping package. The basic package body is a cylinder 33.37 inches in diameter by 77.37 inches high formed by two concentric stainless steel shells whose annular region is filled with lead to meet environmental radiation requirements. The outer half-inch thick shell has a 0.12-inch thick plate spot welded to it, providing a 0.06-inch thick air gap insulator. The inner shell is 15.5 inches inside diameter by 54 inches length. The cask lid is a stainless steel weldment having 7.75 inches of lead shielding. The cask is provided with a drain hole with needle valve and plug, pressure gauge and a pressure relief valve. The total cask weight, including maximum contents of 1800 lbs., is 22,660 lbs. The cask was originally designed and constructed by Battelle Memorial Institute (BMI) and has been owned and in use by the government for many years. The specific transport contents and requirements of the cask are outlined in the BMI-1 specification and approved by NRC. ■



Nuclear Engineering Education Legislation

The U.S. Congress is now considering a bipartisan, bicameral bill entitled “Department of Energy University Nuclear Science and Engineering Act” in support of the Nation’s university research and teaching reactor facilities and nuclear engineering programs. The Senate version (S.242) is a five-year authorization bill (fiscal 2002-2006) and calls for the following programs and support:

\$ in Millions	
Graduate and Undergraduate Fellowships	\$ 15.7
Junior Faculty Research Initiation Grant Program	39.0
Nuclear Engineering and Education Research Program	68.0
Communication and Outreach	1.3
Refueling of Research Reactors and Instrumentation Upgrades	35.0
Re-licensing Assistance	5.9
Reactor Research and Training Award Program	68.0
University-DOE Laboratory Interactions	5.9
Total Authorizations	\$ 238.8

Enactment of this bill into law would address the issues of nuclear engineering education recently raised by the “Blue Ribbon Panel chaired by Dr. Michael Corradini. Support of this Senate bill and a similar bill in the House of Representatives by the university engineering nuclear research reactor community will be vital to its success. To view the bill in its entirety go to <http://thomas.loc.gov/cgi-bin/query>. ■

Visit to the University of Maryland Nuclear Engineering Facilities at College Park, Maryland

The University Program staff of the U.S. Department of Energy, Office of Nuclear Energy, Science and Technology, visited the University of Maryland at College Park, Maryland January 19, 2001. The University Programs staff was comprised of John Gutteridge, Program Director, Dr. William Van Dyke, University Reactor Fuel Assistance Program Manager, and Nancy Hebron-Isreal, Program Analyst. The DOE staff met with and received a tour by University of Maryland personnel, Mohamad Al-Sheikhly, Associate Professor of Materials and Nuclear Engineering, Joseph Silverman, Professor Emeritus, Department of Materials and Nuclear Engineering, and Dr. Ing. Lothar T. Wolf, Professor, Nuclear Engineering. The tour included the operating education and research facilities including the 250 KW TRIGA low-enriched uranium fuel nuclear reactor, the small electron beam accelerator, and the 25 kilo-curies, Cobalt 60, gamma radiation facilities.

These facilities are operational, well managed and maintained, and staffed by university students and university personnel assisting the students in the performance of research and experiments for use in education and training. The facilities have many applications for students in nuclear engineering and radiation and materials sciences, such as nuclear reactor theory and operations, radiation experiment in purification of bacteria and medical therapy, and the electron beam experimental effects on electronics and materials. ■

Selection for the Reactor Sharing and Matching Grant Programs

Proposals for the Reactor Sharing and Matching Grant programs have been received. During February, both programs had peer-reviews of all applications with decisions to be announced in March. The Reactor Sharing program is offered to all U.S. universities with operating research reactors. The program enables each university with a research reactor to "share" it with other institutions by providing educational tours, conducting scientific research, or demonstrating the operation of the reactor for high school and elementary school students and interested local community leaders. Last year, approximately \$600,000 was provided for this program. The Matching Grant program is a 50/50 cost-shared endeavor with the private sector. The Office of Nuclear Energy, Science and Technology provides up to \$60,000 to each university that obtains a matching contribution from a private organization, typically a nuclear utility. These funds are used for upgrading the laboratory or equipment at the institution and/or for providing support for students and faculty in the school of nuclear engineering. Last year, \$2 million was provided for this program through DOE and private sponsorship. ■

Important Dates To Remember

March 26 - 30, 2001 -- Orlando, Florida
NEI / Nuclear Human Resources Professionals
(NHRP) Conference & Workshop

April 30 - May 1, 2001 -- Crystal City, Virginia
Nuclear Energy Research Advisory Committee Meeting

June 17 - 21, 2001 -- Milwaukee, Wisconsin
2001 American Nuclear Society Annual Meeting



Nuclear Engineering Education Research (NEER) Grant

The Department of Energy's NEER solicitation closed on November 16, 2000. A total of 110 proposals were received and have been reviewed by approximately 200 reviewers. The reviewers' evaluations are in the process of being checked by a 3-member panel for each of the eight subject areas. The reviews will be compiled in Idaho and a review of the scoring conducted. Final selections of proposals will be made by late March 2001. The NEER program supports innovative research at universities in nuclear engineering. Results of the peer reviews will be announced in April 2001. ■



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